



FIG. 1A
(Prior Art)

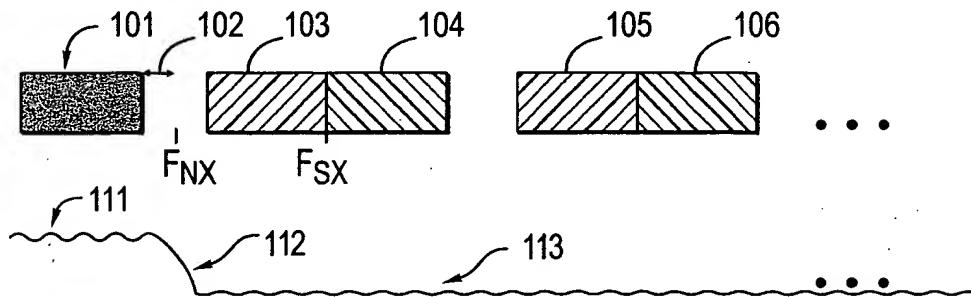


FIG. 1C
(Prior Art)



FIG. 2A
(Prior Art)

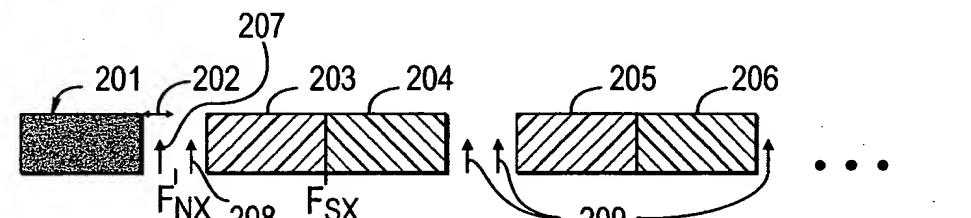


FIG. 2B
(Prior Art)



FIG. 2C
(Prior Art)

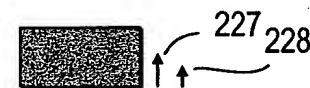


FIG. 2D
(Prior Art)

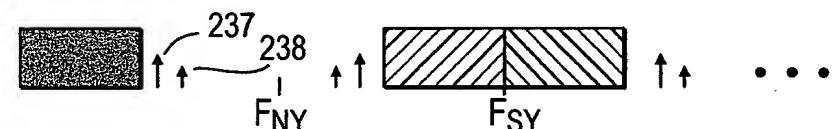


FIG. 2E
(Prior Art)



FIG. 2F
(Prior Art)



FIG. 2G
(Prior Art)

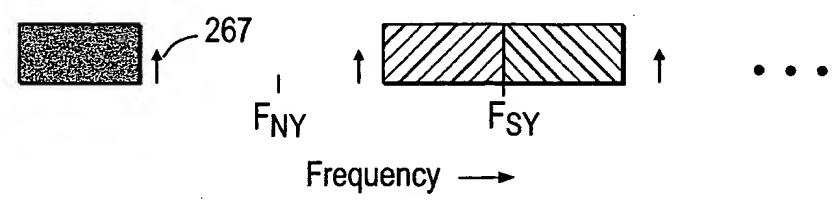




FIG. 3A
(Prior Art)

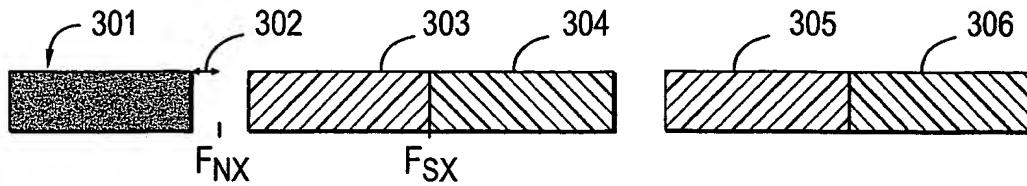


FIG. 3B
(Prior Art)

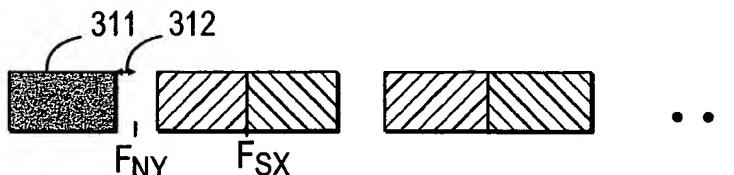


FIG. 3C
(Prior Art)



FIG. 3D
(Prior Art)



FIG. 3E
(Prior Art)

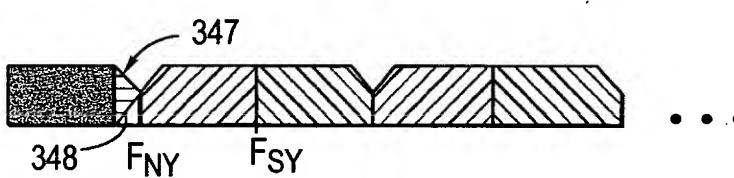


FIG. 3F
(Prior Art)



FIG. 3G
(Prior Art)

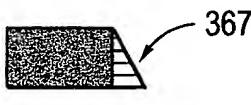
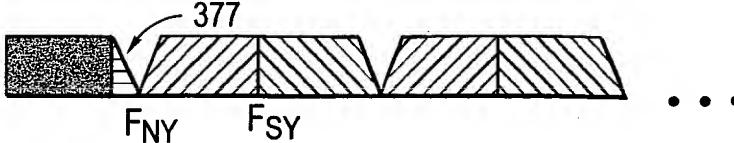


FIG. 3H
(Prior Art)



Frequency →



FIG. 4A
(Prior Art)

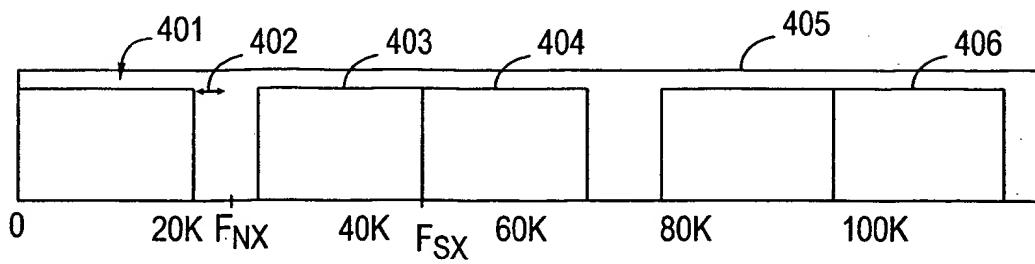


FIG. 4B
(Prior Art)

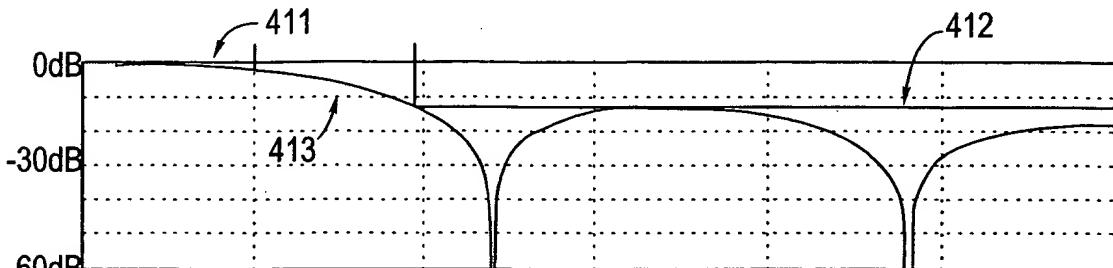


FIG. 4C
(Prior Art)

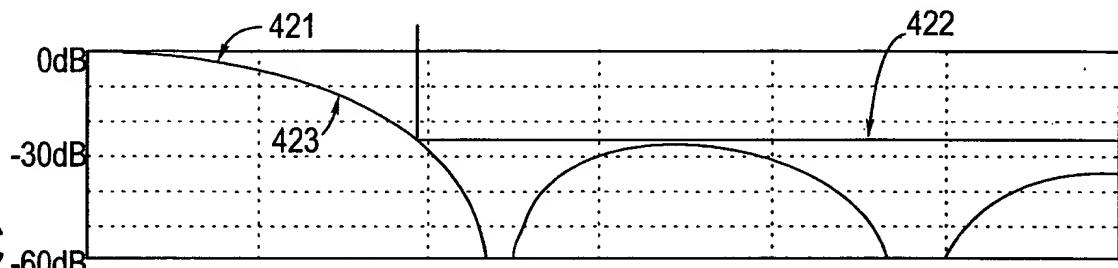


FIG. 4D
(Prior Art)

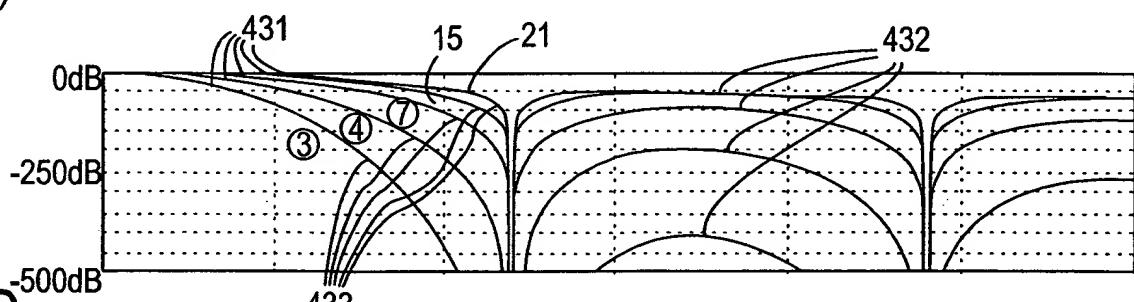
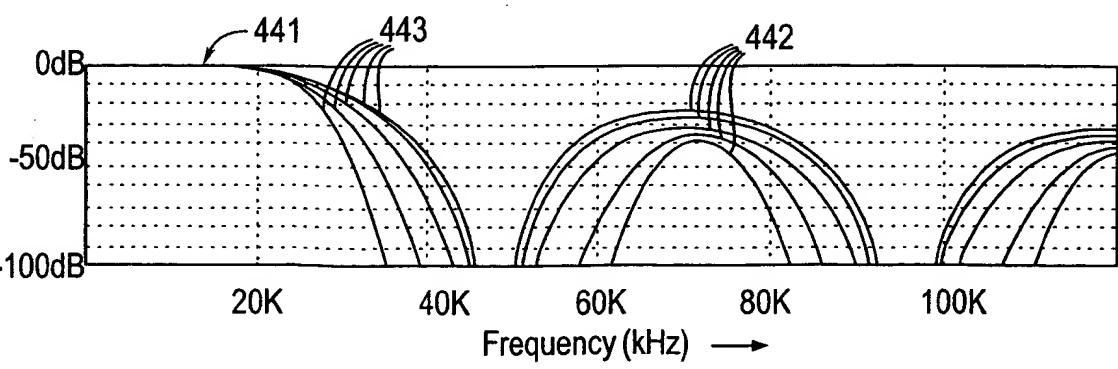


FIG. 4E
(Prior Art)



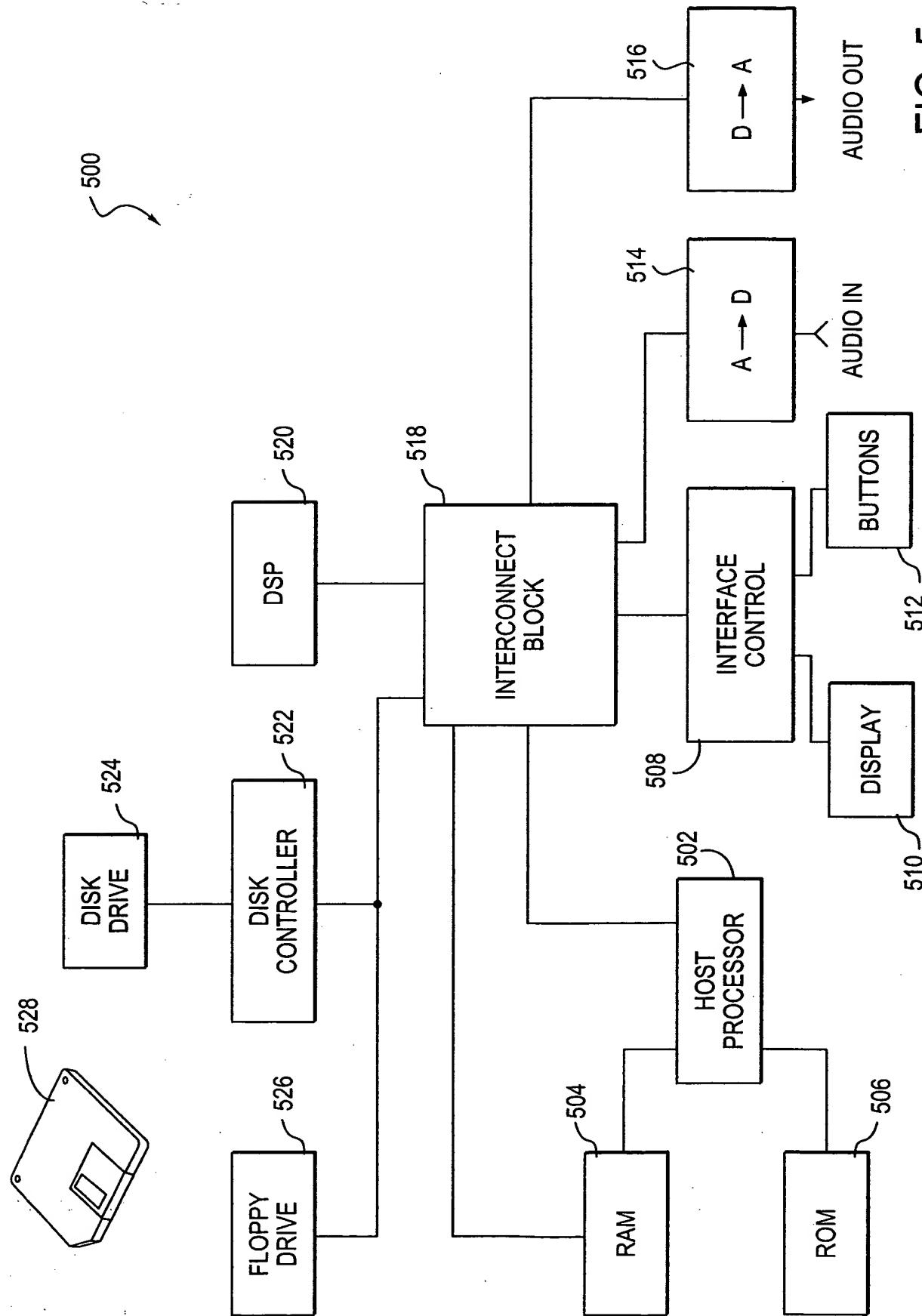
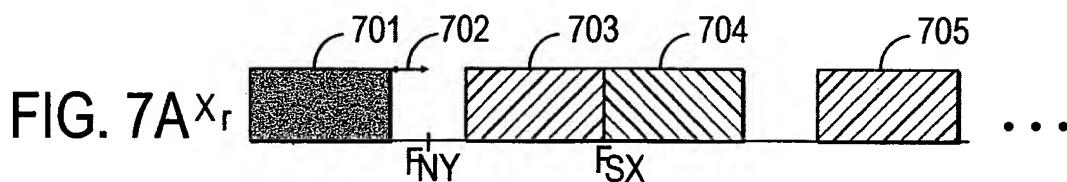
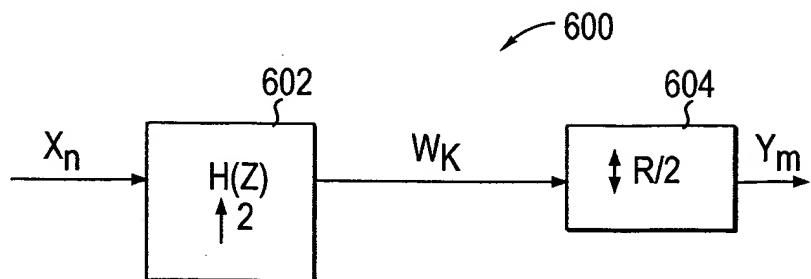


FIG. 5



FIG. 6



upsampling filter
FIG. 7B

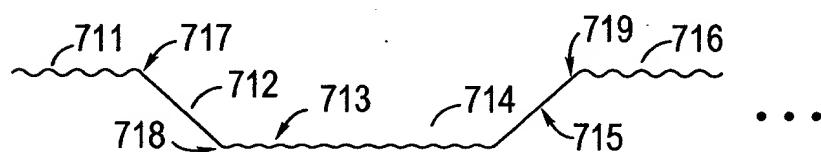


FIG. 7C Y_k



interpolator
FIG. 7D



interpolation result
FIG. 7E



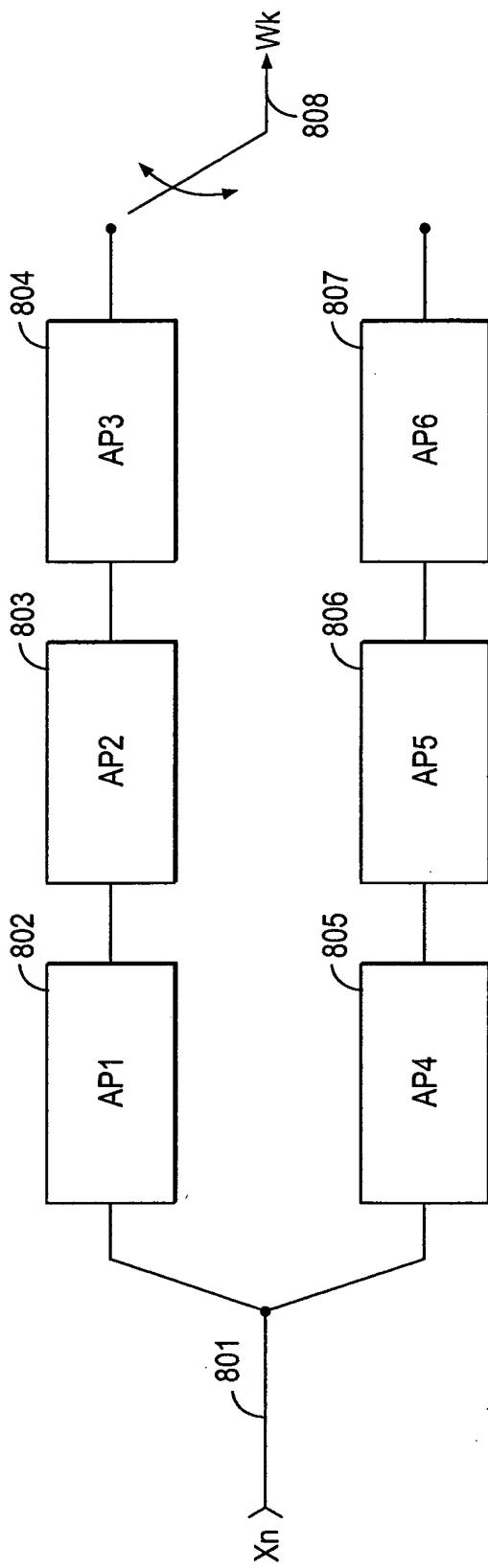


FIG. 8A

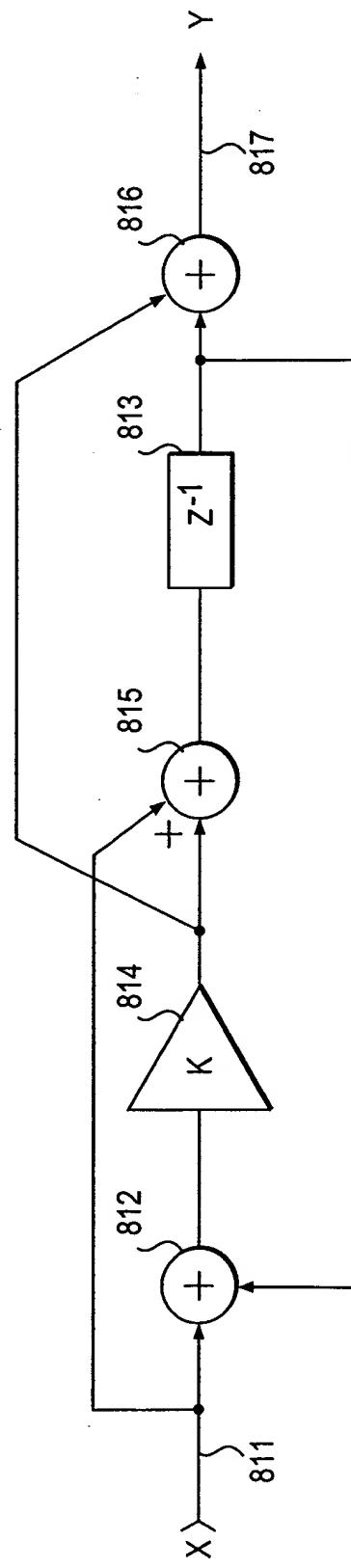


FIG. 8B

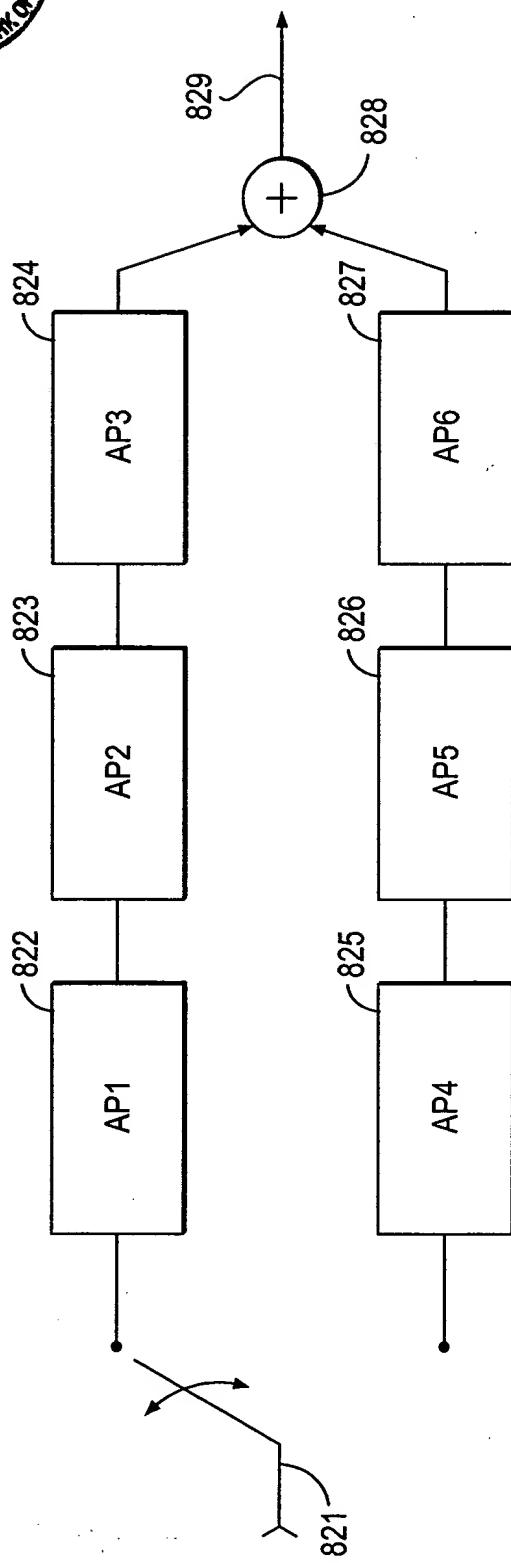
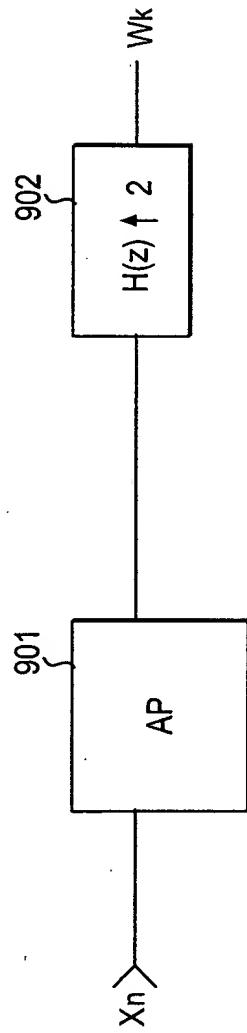


FIG. 8C



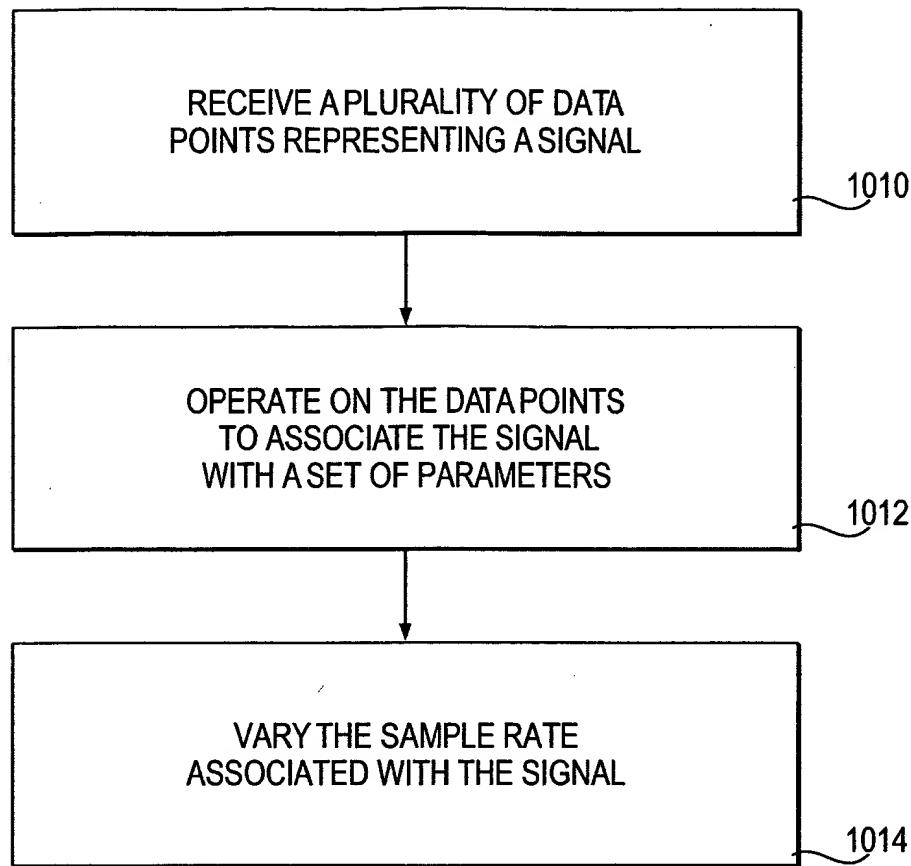


FIG. 10

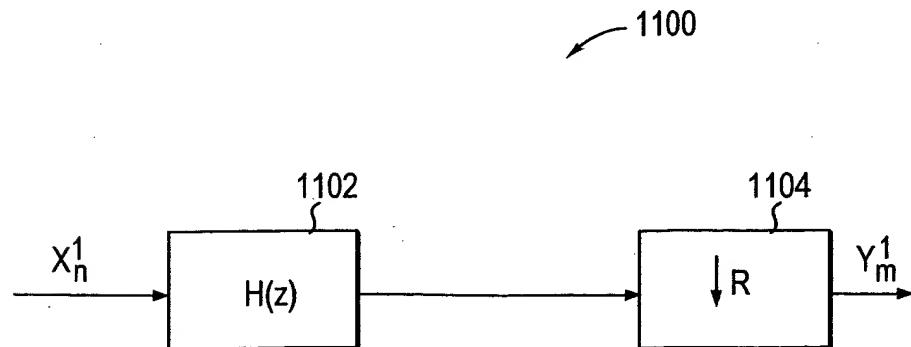
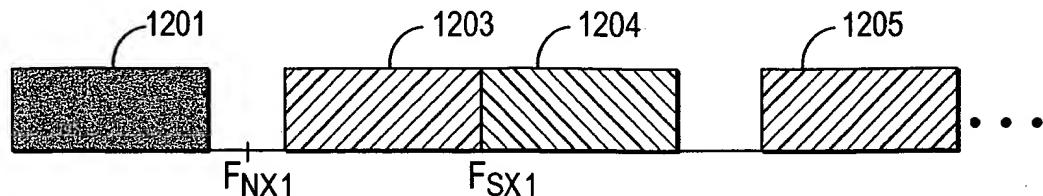


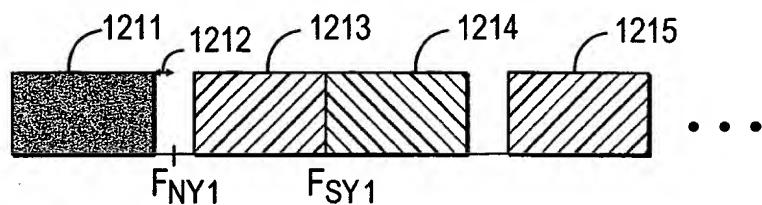
FIG. 11



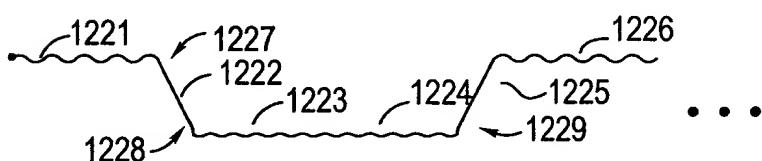
X_n^1
FIG. 12A



Y_m^1 spectrum
FIG. 12B



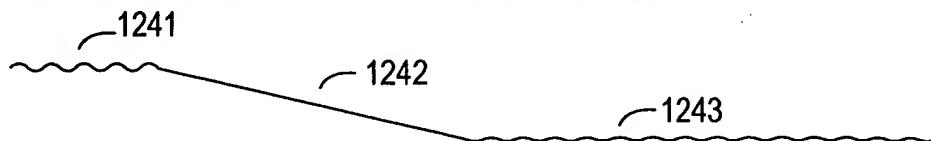
half-band filter
FIG. 12C



intermediate signal
FIG. 12D



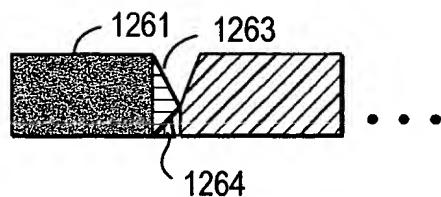
interpolator
FIG. 12E



interpolation result
FIG. 12F

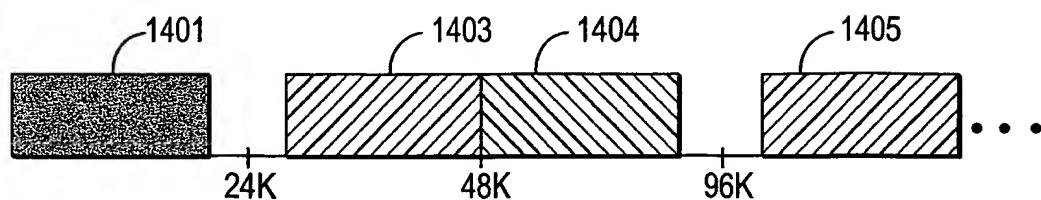


Y_m^1
FIG. 12G

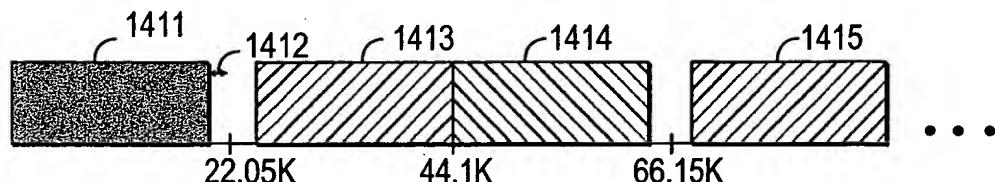


48 kHz
input spectrum

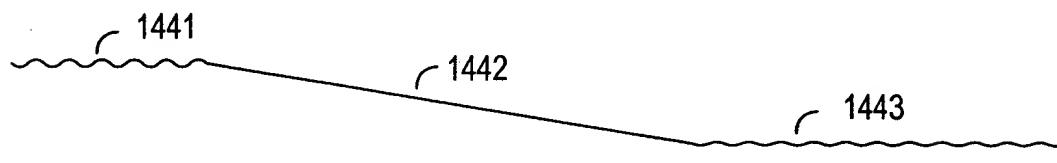
FIG. 14A



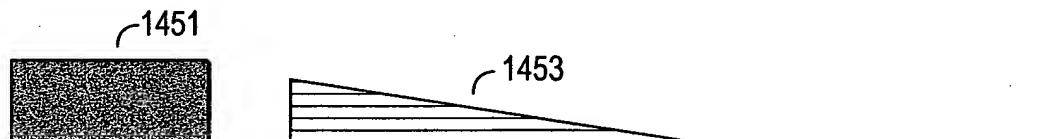
44.1 kHz
spectrum
FIG. 14B



interpolator
filter
FIG. 14C



intermediate
signal
FIG. 14D



half-band
decimating filter
FIG. 14E

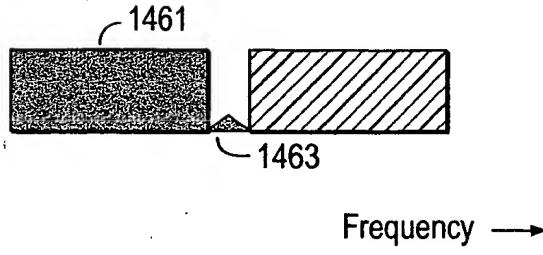


half-band filtered
prior to decimation
FIG. 14F



decimated
Output Signal.

FIG. 14G



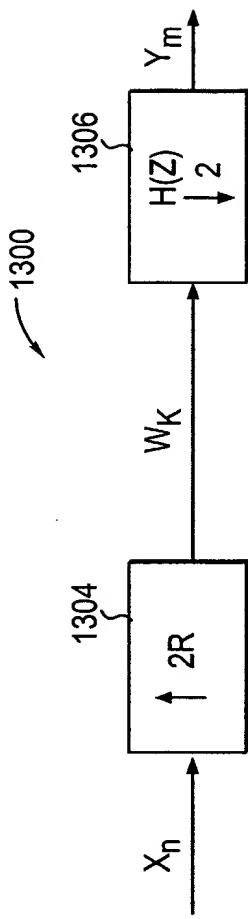
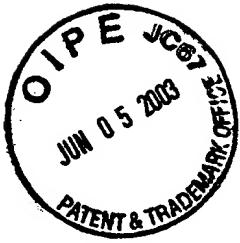


FIG. 13

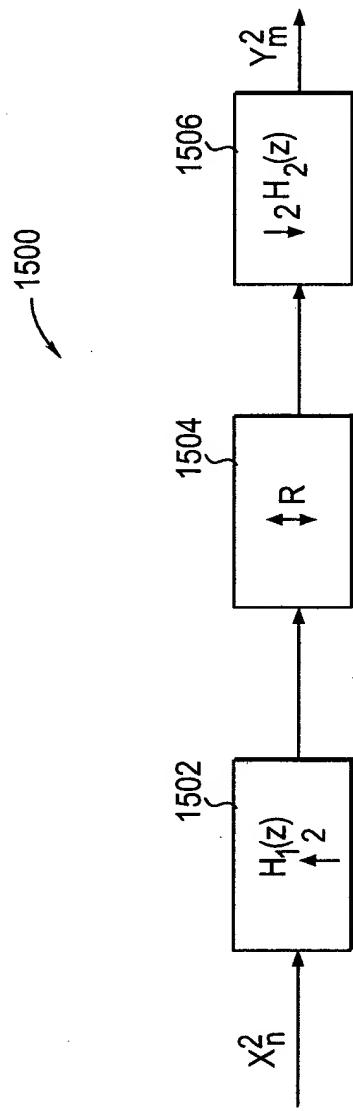


FIG. 15



x_2^n

FIG. 16A

half-band
upsampling filter

FIG. 16B

1st Intermediate
signal

FIG. 16C

Interpolator filter

FIG. 16D

Interpolator filter
results

FIG. 16E

output signal
spectrum
allocation

FIG. 16F

Half-band
decimating filter

FIG. 16G

Half-band filter
results prior to
decimation

FIG. 16H

Decimated
output signal

FIG. 16I

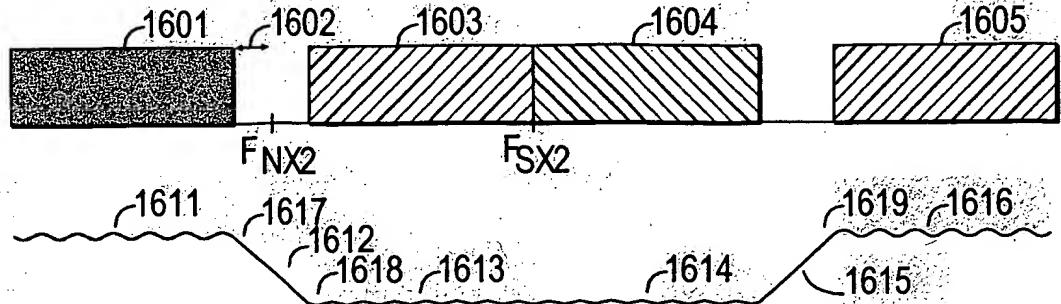
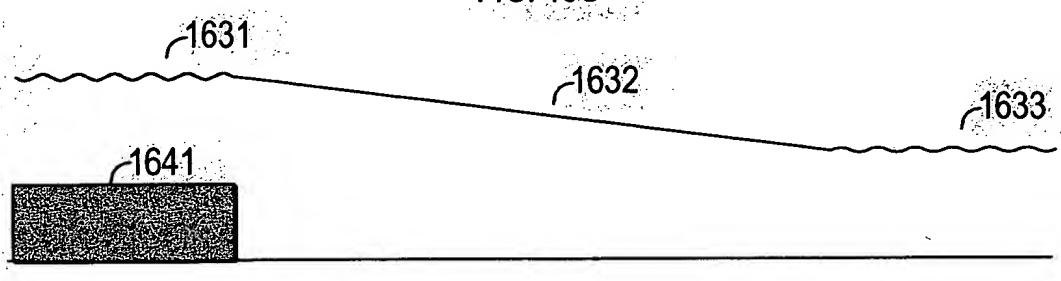


FIG. 16B



FIG. 16C



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